

# Address Canvassing Test: Preliminary Findings

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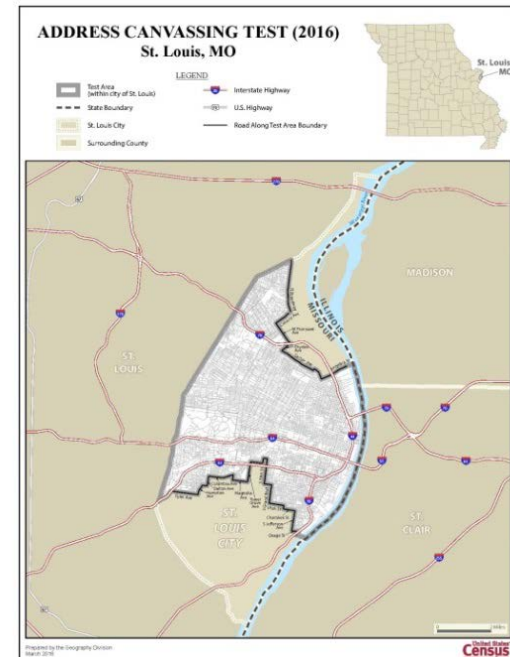
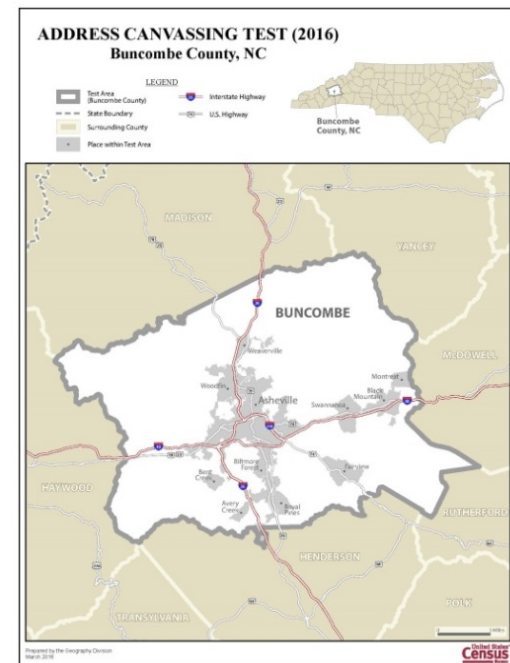
# Address Canvassing Test

## Overview

- Conducted in fall 2016
- Two contiguous sites, approximately 7,500 blocks in total, Buncombe County, NC and part of the city of St. Louis, MO
  - One site is a mix of urban, suburban, and rural territories
  - One site is a principal city of a metropolitan statistical area

## Purpose

- Measure the effectiveness of In-Office Address Canvassing through In-Field Address Canvassing
- Measure the effectiveness of In-Field Address Canvassing
- Understand the implications of moving from Assignment Areas to Basic Collection Units (BCU)
- Conduct an In-Field Relisting to collect data to refine future Quality Control operations



# Address Canvassing Test

## Data Collection Methodology

### 100 percent In-Office Address Canvassing

- Interactive Review and Active Block Resolution were conducted using the same address frame

### 100 percent In-Field Address Canvassing

- 30 days of data collection

### In-Field Relisting

- 20 days of data collection conducted after the 100 percent In-Field Address Canvassing
- Sample of 1,500 blocks
- Staff will be comprised of existing listers
- The field representative assigned to relist a block will be different from the field representative that conducted the initial listing
- Conducted with the same data, systems, and devices as the first listing

# Address Canvassing Test

## Staffing Plan

Site	Position	Buncombe, NC	St. Louis, MO
	<b>Workload</b>	<b>115,680</b>	<b>106,773</b>
Regional Census Center	Admin Specialist/Recruiter	1	1
Regional Census Center	Survey Statistician-Office	1	1
Regional Census Center	Regional Technician	1	1
Regional Census Center	Survey Support Clerk		
Regional Census Center	Recruiting Support Clerk	8	8
Regional Census Center	Administration Clerk		
Regional Census Center	Automation Support Clerk		
In-Field	Census Field Supervisor	8	8
In-Field	Lister (Field Representative)	136	126

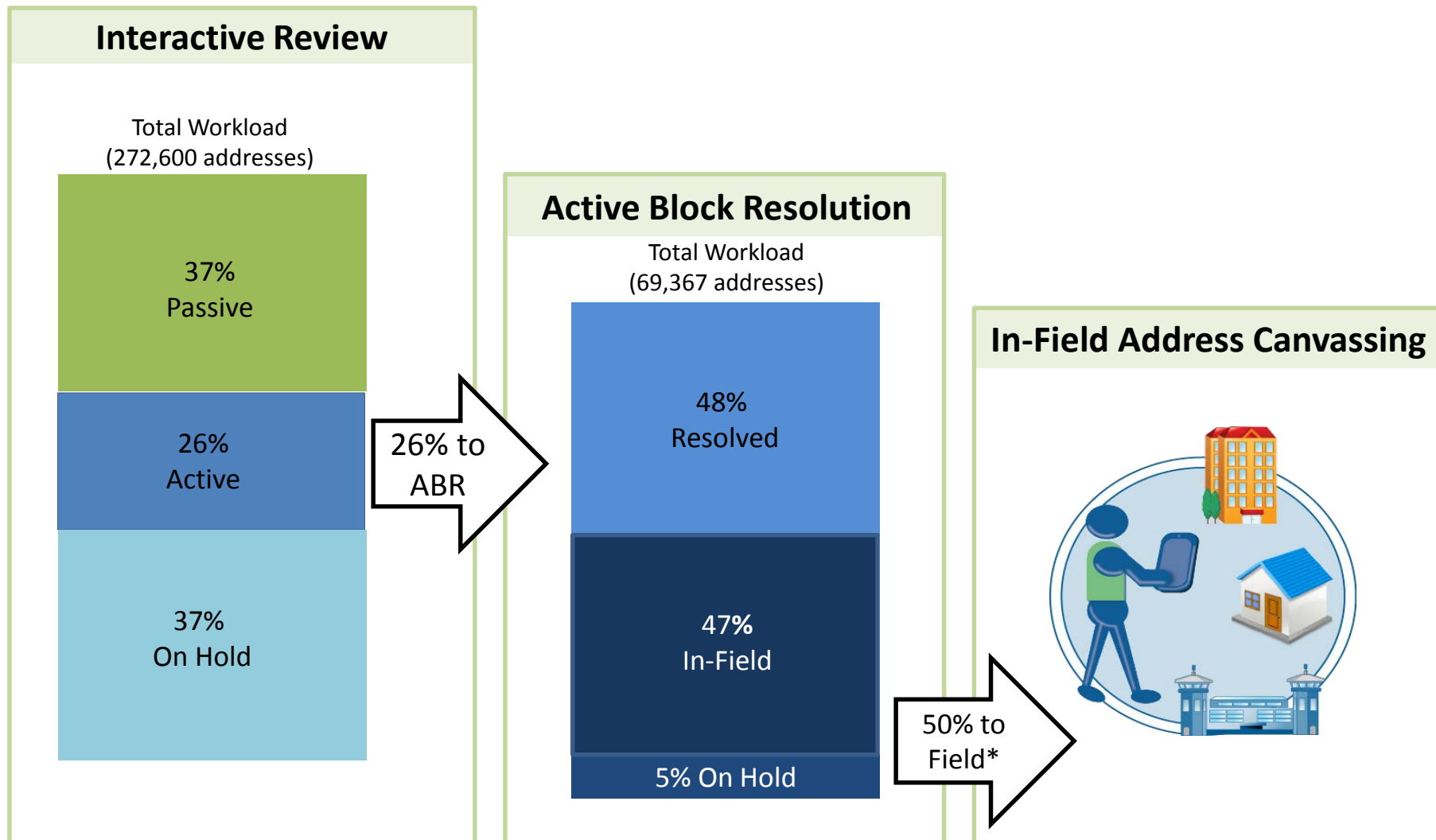
# Address Canvassing Test

## Operational Milestones

Activity	Date	
Hire Regional Census Center (RCC) Manager and Admin Specialist	May 31, 2016	✓
Hire Regional Techs	June 13, 2016	✓
On-Board Decennial Service Center Staff	June 14 – September 2, 2016	✓
Hire RCC Clerks	June 27, 2016	✓
Open RCC	July 6, 2016	✓
Conduct RCC Management Overview Training	August 9 – August 10, 2016	✓
Conduct Interactive Review	August 23 – September 12, 2016	✓
Release Systems into Production	August 29, 2016	✓
Conduct Active Block Resolution	September 12 – November 7, 2016	✓
In-Field Data Collection	September 30 – November 10, 2016	✓
In-Field Relisting Data Collection	October 21 – November 23, 2016	✓
Conduct Census Field Manager and Field Representative Debriefing	November 9, 2016 for St. Louis, MO November 29, 2016 for Buncombe Co, NC	✓
Conduct Chicago and Atlanta Regional Census Center Debriefing	December 1, 2016	✓
Release Address Canvassing Test Analysis Report	April 29, 2017	

# Address Canvassing Test

## Production Data



# Address Canvassing Test

## In-Field Production Data

	Basic Collection Units (BCUs) Completed	Addresses in Workload
Atlanta (Buncombe Co, NC)		
Production	3,454	132,023
Relisting	246	22,047
Chicago (St. Louis, MO)		
Production	4,096	127,525
Relisting	441	18,145
Address Canvassing Test Total	8,237	299,740
Production		259,548
Relisting		40,192

# Address Canvassing Test

## Lessons Learned

- Training
- In-field data assignments
- Quality Control



# Address Canvassing Test Selected Block Analysis

## Commercial-to-Residential Conversion

Block 2074, Tract 1275, St. Louis, MO:

- Interactive Review resulted in passive status, with no new structures or housing visible in imagery
- In-Field Address Canvassing listed 87 new addresses, all units within a single existing structure
- A commercial file tracking commercial-to-residential conversions and new multi-unit construction indicated 87 planned units within block, with estimated completion, February 2016
- November 2016 US Postal Service Delivery Sequence File (DSF) contained the same 87 addresses as were listed in the field, geocoded to the same block

# Address Canvassing Test Selected Block Analysis

## Suburban Housing, Buncombe County

Five blocks selected at random for review:

- Block 2012, Tract 25.05: sent to ABR, with same actions taken as in the field (six verifies, two non-address changes)
- Block 1004, Tract 26.06: sent to ABR; ABR verified all addresses and no other actions taken, same result in field
- Block 1004, Tract 30.01: sent to ABR, same actions were taken in field as in ABR (four address records flagged as duplicates)
- Block 3034, Tract 31.02: identified as passive in IR, IFAC verified all addresses and took no other actions
- Block 1024, Tract 23.02: IR identified growth and undercoverage in the MAF, the block has not yet been worked in ABR, fieldwork identified three new addresses and 13 non-address changes, two of the adds were on the next version of the DSF, the third added address was already in the MAF, but had not passed the filter for inclusion on the address list for fieldwork

# Address Canvassing Test Selected Block Analysis

## Multiple Structures on Rural Parcels, Buncombe County

Tract 27.03, Block 2013, Buncombe County:

- Multiple structures, such as trailers, in rural areas of Buncombe County pose a challenge for Interactive Review
- Interactive Review classified the block as passive
- Fieldwork verified 262 addresses and added 30 housing units, some only with information added to the location description field. Examples include:
  - “Camper with door mat. Appears occupied”
  - “White trailer with brown trim”
  - “Camper next to road behind [house] could be used as residence, can’t confirm”
- Fieldwork also took other actions, including: 14 deletions, 17 changes to components of addresses, 17 changes to other information about a structure

# Questions?

# 2017 Census Test and 2018 End-to-End Census Test

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Decennial Census Management Division

# 2017 Census Test

## Overview

- April 1, 2017 Census Day
- A nation-wide self-response test of 80,000 housing units

## Purpose

- Test the integration of operations and systems for Self-Response
- Test the feasibility of collecting tribal enrollment information

# 2017 Census Test

## Sample Design

- National sample: 80,000 housing units
  - Housing units in mailable areas
  - Remove housing units from recent decennial tests and ACS
  - Stratified to oversample housing units in:
    - Alaska
    - Areas with relatively higher populations of AIAN
    - Areas with lower propensity to respond online
- Tribal Enrollment reinterview: 15,000 housing units
  - Conducted by phone
  - Heavy oversample of housing units:
    - Alaska
    - People who identify as AIAN
    - People who indicate they are enrolled

# 2017 Census Test

## Contact Strategy: National Sample

### Internet First

- 1 Letter
- ↓
- 2 Letter
- ↓
- 3\* Postcard
- ↓
- 4\* Paper Questionnaire + Letter
- ↓
- 5\* "It's not too late" Postcard

\*Mailed only to nonrespondents

### Internet Choice

- 1 Paper Questionnaire + Letter
- ↓
- 2 Letter
- ↓
- 3\* Postcard
- ↓
- 4\* Paper Questionnaire + Letter
- ↓
- 5\* "It's not too late" Postcard



About 87 – 90 percent of addresses will receive English-only questionnaires, letters, and postcards



About 10 – 13 percent of addresses will receive bilingual questionnaires, letters, and postcards



# 2017 Census Test

## Key Activities

Activity	Date
Conduct Census Questionnaire Assistance (CQA)	March 20 – May 12, 2017
Conduct Self-Response, Including Non-ID Processing	March 20 – May 12, 2017
Census Day	April 1, 2017

# 2018 End-to-End Census Test

## Goals

- Validate that the operations in scope for the 2018 End-to-End Census Test are ready to go into production for the 2020 Census
- Test and validate major operational threads, procedures, systems, and infrastructure (IT and non-IT) together to ensure proper integration and conformance with functional and non-functional requirements
- Produce a prototype of geographic and data products

# 2018 End-to-End Census Test

## Operational Scope

Focus of the Test

Required to  
Support the Test

NOT Included in  
the Test

### SUPPORT

#### Program Management

Program  
Management

#### Census/Survey Engineering

Systems  
Engineering  
& Integration

Security,  
Privacy, and  
Confidentiality

Content and  
Forms Design

Language  
Services

#### Infrastructure

Decennial Service  
Center

Field  
Infrastructure

Decennial  
Logistics  
Management

IT Infrastructure

### FRAME

Geographic Programs

Local Update of  
Census Addresses

Address Canvassing \*\*

### RESPONSE DATA

Forms Printing and Distribution

Paper Data Capture

Integrated Partnership &  
Communications

Internet Self-Response

Non-ID Processing

Update Enumerate

Group Quarters \*

Enumeration at Transitory  
Locations

Census Questionnaire  
Assistance

Nonresponse Followup

Response Processing

Federally Affiliated Americans  
Count Overseas

### PUBLISH DATA

Data Products and  
Dissemination \*

Redistricting Data \*

Count Review

Count Question  
Resolution

Archiving

### OTHER CENSUSES

Island Areas Censuses

### TEST AND EVALUATION

Coverage Measurement  
Design & Estimation

Coverage Measurement  
Matching

Coverage Measurement  
Field Operations

Evaluations and  
Experiments

(\*) – Not in scope for test sites descope from 2017 Census Test and 2017 Puerto Rico Census Test that may be added to the 2018 End-to-End Census Test.

(\*\*) – For test sites descope from 2017 Census Test and 2017 Puerto Rico Census Test that may be added to the 2018 End-to-End Census Test, only In-Office Address Canvassing is in scope.

# 2018 End-to-End Census Test Sites

2018 End-to-End Census Test Sites	Characteristics of Note
Pierce County, WA	Military installation; language diversity
Providence County, RI	Aligns with national demographic characteristics; hard to count areas; multi-units & group quarters
Bluefield-Beckley-Oak Hill, WV	Rural; non-city style address; mobile homes; areas of low internet access

Additional Test Sites – Under Consideration *	Characteristics of Note
Carolina, Loíza, and Trujillo Alto Municipios, PR	<ul style="list-style-type: none"> <li>Address variations unique to Puerto Rico; Spanish versions of systems supporting field activities</li> <li>Site descope from 2017 Puerto Rico Census Test</li> </ul>
Colville Reservation & Off-Reservation Trust Land, WA	<ul style="list-style-type: none"> <li>Non-traditional addresses on tribal reservations</li> <li>Site descope from 2017 Census Test</li> </ul>
Standing Rock Reservation, SD-ND	<ul style="list-style-type: none"> <li>Non-traditional addresses on tribal reservations</li> <li>Site descope from 2017 Census Test</li> </ul>

(\*) Only operations that were in-scope for the 2017 Census Test and 2017 Puerto Rico Census Test will be considered for these sites. Additionally, In-Field Address Canvassing for the Puerto Rico site, originally in-scope for the 2017 Puerto Rico Census test, is out of consideration for the 2018 End-to-End Census Test.

# 2018 End-to-End Census Test

## Test Sites Scope Comparison

Major Operations	2018 End-to-End Census Test Sites			Additional Sites Under Consideration		
	Pierce County, WA	Providence County, RI	Bluefield-Beckley-Oak Hill, WV	Original 2017 Census Test Sites Colville Reservation and Off-Reservation Trust Land, WA	Standing Rock Reservation, SD-ND	Original 2017 Puerto Rico Census Test Site Carolina, Loíza, and Trujillo Alto Municipios, PR
Address Canvassing	X	X	X	In-Office only	In-Office only	In-Office only
Internet Self-Response	X	X	X	To support UE only (no TEA 1)	To support UE only (no TEA 1)	X
Update Enumerate	X	X	X	X	X	X
Nonresponse Followup	X	X	X	N/A (no TEA 1)	N/A (no TEA 1)	X
Group Quarters	X	X	X	Out-of-scope	Out-of-scope	Out-of-scope
Data Products and Dissemination	X	X	X	Out-of-scope	Out-of-scope	Out-of-scope *
Redistricting Data	X	X	X	Out-of-scope	Out-of-scope	Out-of-scope *

(x) = In-Scope

(\*) The inclusion of Puerto Rico in the P.L. 94-171 prototype data product planned for the test is being evaluated. These entries may change from out-of-scope to in-scope based on that evaluation.

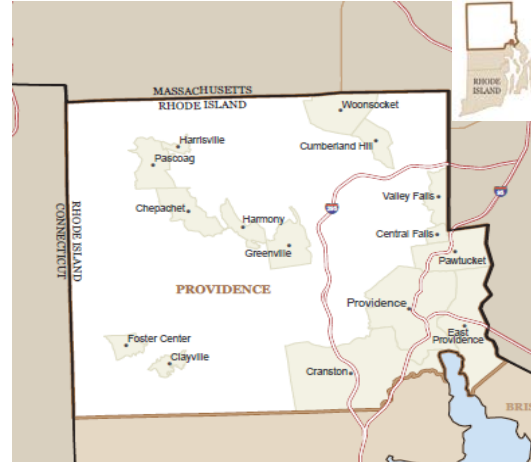
# 2018 End-to-End Census Test

## Workload by Site

Pierce County, WA



Providence County, RI



Bluefield-Beckley-Oak Hill, WV



Operation	Workload Unit	Pierce County, WA	Providence County, RI	Bluefield-Beckley-Oak Hill, WV	Total
Total Housing Units	-	333,000	264,000	174,000	771,000
In-Field Address Canvassing	HU	111,000	99,000	30,000	240,000
Update Enumerate	HU	9,000	3,000	84,000	96,000
Self-Response	HU	324,000	261,000	90,000	675,000
Nonresponse Followup	HU	136,000	133,000	54,000	323,000
Group Quarters	GQ	450	450	100	1,000

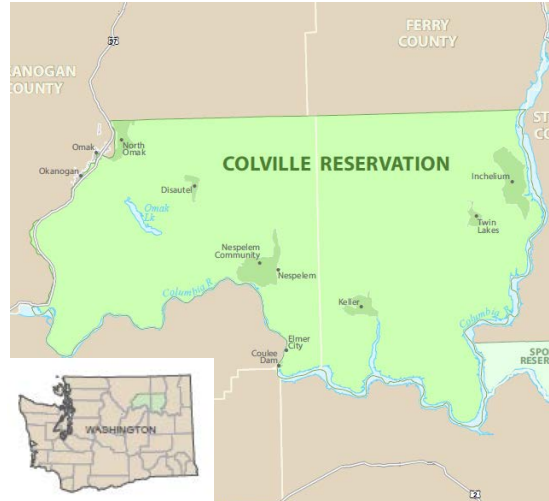
# 2018 End-to-End Census Test

## Workload for Sites Under Consideration

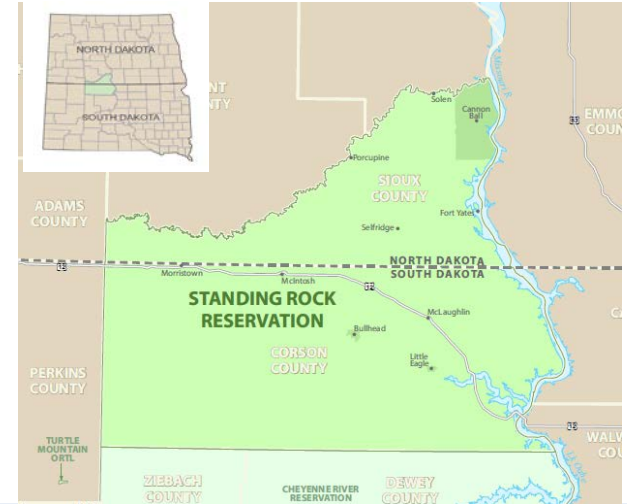
**Carolina, Loíza, and Trujillo Alto Municipios, PR**



**Colville Reservation and Off-Reservation Trust Land, WA**



**Standing Rock Reservation, SD-ND**



Operation *	Workload Unit	Additional Test Sites Under Consideration		
		Puerto Rico Municipios	Colville Reservation and Off-Reservation Trust Land, WA	Standing Rock Reservation, SD-ND
Total Housing Units	-	123,000	3,500	2,900
Update Enumerate	HU	61,500	3,500	2,900
Self-Response	HU	61,500	Available to HUs before/during UE	
Nonresponse Followup	HU	50,000	Not Applicable	

(\*) In-Field Address Canvassing for the Puerto Rico site, originally in-scope for the 2017 Puerto Rico Census Test, is out of consideration for the 2018 End-to-End Census Test.

# 2018 End-to-End Census Test

## Operational Overview

### Address Canvassing

In-Office: using empirical geographic evidence to assess the current address list and make changes where necessary

In-Field: visit specific geographic areas to identify every place where people could live or stay – Areas to be visited identified by In-Office process

### Self-Response

Housing units in the selected areas will be contacted by mail and invited to complete a questionnaire (with a unique Census ID) via the Internet/paper based on the panel design.

Respondents seeking to complete a questionnaire without knowledge of a Census ID may do so via Non-ID Processing

### Nonresponse Followup

Enumerators will follow up with nonresponding households to collect data

Administrative records and third-party data will be used to reduce workload prior to and during field work

### Field Verification

Field staff verify the address of Non-ID self-responses for addresses that do not match to a Census address record, and collect coordinate data, if possible, to determine the census block location



# 2018 End-to-End Census Test

## Operational Overview Continued

### Update Enumerate

Conduct in designated geographic areas with unique challenges to self-response methodology

Canvass the block to update the address and feature data

Attempt enumeration at each housing unit (conduct interview when someone is home and leave notice of visit in other cases) if a response has not been received

### Update Enumerate Followup

Enumerate nonresponding households using the same business rules as Nonresponse Followup

### Group Quarters

Group Quarters Advance Contact: Inform the Group Quarters contact person of the upcoming enumeration and different enumeration modes; address privacy, confidentiality and security concerns; and inquire about the availability of electronically transmittable records for enumeration

Service-Based Enumeration: Provide an opportunity for people experiencing homelessness and receiving service at a service-based location to be counted

Group Quarters Enumeration: Enumerate people living or staying in group quarters

# 2018 End-to-End Census Test

## Operational Overview Continued

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### Content and Forms Design

Race/Ethnicity: Combined question format with checkboxes and detailed write-in, based on recommendations from the 2015 National Content Test findings

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Coverage: Continue using wording from the 2017 Census Test, pending any potential changes based on 2016 Census Test analysis (forthcoming)

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### Language Services

Internet instrument available in Spanish, Chinese, Vietnamese, Korean, Russian, Arabic, Tagalog

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Census Questionnaire Assistance interviews available in Spanish, Chinese, Vietnamese, Korean, Russian, Arabic, Tagalog

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Bilingual paper questionnaire and associated mailing materials available in Spanish

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Enumeration instrument and associated field materials available in Spanish

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### Integrated Partnership and Communications

Engage and motivate people to self-respond through our Partnership Specialists

# 2018 End-to-End Census Test

## Operational Overview Continued

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### Census Questionnaire Assistance

Provide assistance to respondents via telephone, Web chat and email, with the option to complete an interview over the telephone

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Includes outbound operations to support quality assurance for enumeration operations

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### Quality Assurance

Listing Quality Control: The work of the production staff is reviewed by Quality Control staff to ensure proper execution of tasks – applies to Address Canvassing and the listing portion of Update Enumerate

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Reinterview: A sample of enumeration cases are selected for reinterview, to deter and detect enumerator falsification – applies to Nonresponse Followup, Field Verification, Update Enumerate, and Group Quarters

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Re-collect: A sample of self-response cases are selected for data collection to be repeated – applies to Non-ID Cases, but is not limited to Non-ID

Re-collect is one aspect of Fraud Detection

# 2018 End-to-End Census Test

## Operational Overview Continued

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### Data Products

Create P.L. 94-171 prototype data and geographic products using 2018 End-to-End Census Test results

Release products via an embargoed controlled electronic delivery method, and obtain feedback from redistricting stakeholders

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Includes enhanced disclosure avoidance methodology

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Replicate the 2010 Census Apportionment data results by exercising system-to-system handoffs to demonstrate system readiness for 2020

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### Archiving

Store response data in Census Image Retrieval Application (CIRA) to support post-test research and evaluation

# 2018 End-to-End Census Test

## Mail Strategy

### Self-Response

- Complete canvass of 675,000 housing units
- Self-response contact strategy two-panel design
- Staggered mailings for Internet First over multiple cohorts

Panel	Cohort	Mailing 1 Letter	Mailing 2 Letter	Mailing 3* Postcard	Mailing 4* Letter + Questionnaire	Mailing 5* “It’s not too late” Postcard
Internet First	1	March 16, 2018	March 20, 2018	March 30, 2018	April 6, 2018	April 13, 2018
	2	March 19, 2018	March 23, 2018	April 2, 2018	April 9, 2018	April 16, 2018
	3	March 22, 2018	March 26, 2018	April 5, 2018	April 12, 2018	April 19, 2018
Internet Choice	N/A	March 16, 2018 Letter + Questionnaire	March 20, 2018	March 30, 2018	April 6, 2018	April 13, 2018

(\*) Targeted only to nonrespondents

Cohorts and dates are tentative and subject to change

# 2018 End-to-End Census Test

## Mail Strategy Continued

### Self-Response in Update Enumerate Areas

- Complete canvass of 96,000 housing units
- Mail to all mailable addresses in the Update Enumeration portion of the test site
- Send materials to encourage self-response
- If a unit self-responds, reduces need for field enumeration

Panel	Mailing 1	Mailing 2	Mailing 3*
Internet Choice (mailable addresses)	Mail Questionnaire +Letter	Direct Mailer  May be limited to P.O. Boxes in a subset of the sites. Details to be determined.	Postcard

(\*) Targeted only to nonrespondents

**Notional**

# 2018 End-to-End Census Test

## Key Activities

Activity	Date	
Conduct In-Office Address Canvassing	October 27, 2016 – February 2, 2017	✓
Open New York Regional Census Center	January 3, 2017	✓
Open Philadelphia Regional Census Center	January 3, 2017	✓
Open Los Angeles Regional Census Center	January 3, 2017	✓
Open Area Census Office in Puerto Rico	January 31, 2017	
Begin Address Canvassing Field Staff Recruitment	March 10, 2017	
Open Area Census Offices in Providence, RI; Bluefield-Beckley-Oak Hill, WV; and Pierce County, WA	March 31, 2017	
Conduct In-Field Address Canvassing	August 14 – September 29, 2017	
Begin Peak Operations Field Staff Recruitment	August 31, 2017	

# 2018 End-to-End Census Test

## Key Activities Continued

Activity	Date
Conduct Group Quarters Advance Contact	January 5 – March 9, 2018
Conduct Self-Response, Including Non-ID Processing	March 19 – August 31, 2018
Conduct Group Quarters Enumeration	March 28 – June 12, 2018
Census Day	April 1, 2018
Conduct Early Nonresponse Followup	April 3 – June 9, 2018
Conduct Nonresponse Followup Reinterview	April 4 – August 31, 2018
Conduct Update Enumerate	April 16 – June 16, 2018
Conduct Update Enumerate Reinterview	April 19 – July 17, 2018
Conduct Update Enumerate Followup	May 7 – July 13, 2018
Conduct Nonresponse Followup	May 10 – August 20, 2018
Publish Prototype P.L. 94-171 Data and Support Products	April 1, 2019



# Questions?